(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host cow such that the reconstructed embryo develops to term.

20. The method of claim 19, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

21. The method of claim 19 or 20, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

22. The method of claim 19 or 20, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

23. A method of cloning a bovine fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid bovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested bovine oocyte to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host cow such that

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the reconstructed embryo develops into a fetus.

24. The method of claim 23, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

25. The method of claim 23 or 24, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

26. The method of claim 23 or 24, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

27. A method of cloning a sheep by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid ovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested ovine oocyte to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host sheep such that the reconstructed embryo develops to term.

28. The method of claim 27, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

29. The method of claim 27 or 28, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

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30. The method of claim 27 or 28, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

31. A method of cloning a ovine fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid ovine fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested ovine oocyte to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host sheep such that the reconstructed embryo develops into a fetus.

32. The method of claim 31, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

33. The method of claim 31 or 32, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

34. The method of claim 31 or 32, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

35. A method of cloning an non-human mammal by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid non-human mammalian fibroblast

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in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops to term.

36. The method of claim 35, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

37. The method of claim 35 or 36, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

38. The method of claim 35 or 36, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

39. A method of cloning a non-human mammalian fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid non-human mammalian fibroblast in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

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(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops into a fetus.

40. The method of claim 39, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

41. The method of claim 39 or 40, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

42. The method of claim 39 or 40, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

43. A method of cloning a non-human mammal by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid non-human mammalian differentiated cell in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human

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mammal of the same species such that the reconstructed embryo develops to term.

44. The method of claim 43, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

45. The method of claim 43 or 44, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vitro*.

46. The method of claim 43 or 44, wherein said step of culturing said activated, reconstructed embryo to blastocyst is performed *in vivo*.

47. A method of cloning a non-human mammalian fetus by nuclear transfer comprising:

(i) inserting a nucleus of a cultured diploid non-human mammalian differentiated cell in the G1 phase of the cell cycle into an unactivated, enucleated metaphase II-arrested non-human mammalian oocyte of the same species to reconstruct an embryo;

(ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;

(iii) activating the resultant reconstructed embryo;

(iv) culturing said activated, reconstructed embryo to blastocyst; and

(v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops into a fetus.

48. The method of claim 47, wherein said step of activating the resultant reconstructed embryo comprises activating the embryo with a DC pulse.

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